

THYSANOPTERA FROM NORTHERN NEW JERSEY WITH DESCRIPTIONS OF NEW SPECIES

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The species listed herein include only those of which the author has specifically determined specimens from the region discussed. Some apparently new species represented by uniques or inadequate material are not described. Collecting has not been at all intensive, and many species, even very common ones, that occur in this section of the United States have not been taken. I owe much material to Mr. W. S. Fields, of the Bureau of Entomology and Plant Quarantine, whose records are followed by his initials; specimens collected by others have their names given in full. Records with no name or initials following are those of the author. Paratypes of all species have been deposited in the collection of Dr. H. Priesner.

LIST OF SPECIES

Aeolothripidæ

- Aeolothrips albicinctus* Hal. Demarest, May 10, on grass.
W. S. F.
- Ae. bicolor* Hinds. Demarest, Sept. 6, on grass. W. S. F.
- Ae. fasciatus* (L.). Demarest, Sept. 6, on *Solidago*. W. S. F.
- Ae. melaleucus* Hal. Demarest, June 26, on black locust, abundant.
- Ae. versicolor* form *similis* Priesn. Morganville, June 4, on *Syringa*, E. Kostal. Alpine, May 16, on oak, abundant.
- Ae. vittipennis* Hood. Demarest, May 11, on grass. W. S. F.
May 30, on black locust.

Heterothripidæ

- Heterothrips arisaemæ* Hood. Demarest, everywhere throughout the season in flowers of *Arisaema*

Thripidæ

CHIROTHRIPINÆ

- Chirothrips manicatus* Hal. and form *adusta* Priesn. Throughout the season on grasses, everywhere.
- C. spiniceps* Hood. Demarest, Aug. 19 and Sept. 6, on grass. W. S. F.
- Aptinothrips rufus* (Gmel.). Throughout the season, on grass.

SERICOTHRIPINÆ

- Sericothrips annulipes* Hood. Demarest, June 26, on black locust, abundant.
- S. baptisia* Hood. Demarest, June 24, July 5, on *Baptisia*, abundant. W. S. F.
- S. cingulatus* Hinds. Demarest, June 6, on white clover. W. S. F.
- S. interruptus* Hood. Montville, July 28, abundant on foliage of hickory and birch.
- S. sambuci* Hood. Fort Lee, July 18–Aug. 25, common on leaves of *Sambucus*.
- Scirtothrips brevipennis* Hood. Montville, July 27, beaten from red cedar.
- S. niveus* Hood. Chatham, June 16 and 27, on *Cornus* leaves. S. D. Whitlock. Demarest, May 30, on *Cornus* leaves, abundant.
- S. ruthveni* Hood. Demarest, May 30, on *Kalmia* terminal shoots, abundant.
- Anaphothrips obscurus* (Mull.). Common throughout the season on grasses.
- Leucothrips piercei* (Morg.). Fort Lee, common on *Tilia* leaves, May 28, July 25 to late August.
- Dendrothrips ornatus* (Jabl.). Chatham, Aug. 8, on leaves of *Syringa*, A. G. Harley. Fort Lee, throughout its season, so abundant on California privet in August that the leaves appeared gray.

THRIPINÆ

- Odontothrips loti* (Hal.). Demarest, June 24, July 5, common on *Baptisia* leaves. W. S. F.
- Scolothrips sexmaculatus* (Perg.). Montville, July 27, on cedar.

- Frankliniella fusca* (Hinds). Common throughout the season on grasses.
- F. stylosa* Hood. In spring common in various flowers.
- F. tritici* (Fitch). Common throughout the region.
- Bregmatothrips iridis* Wats. Demarest, June 25 to Aug. 30, common on *Iris*, with macropterous females occasionally taken. W. S. F.
- Taeniothrips simplex* Mor. Common on *Gladiolus*, some seasons completely ruining most of the flowers.
- T. betulæ* Cwfd., n. sp. Fort Lee, on leaves of *Betula*, July 10-24. Description following.
- Ctenothrips bridwelli* Frankl. Demarest, abundant on skunk cabbage. Found early in spring and in mid July. W. S. F.
- Oxythrips divisus* Hood. Alpine, May 1, on pine.
- Pseudothrips inæqualis* (Beach). Fort Lee, July 18, in terminal leaves of willow.
- Microcephalothrips abdominalis* (Crawf.). Common in flowers of Compositæ in summer and autumn.
- Thrips impar* Hood. Demarest, June 26 to Aug. 25, abundant on *Impatiens*. W. S. F. and J. C. C. Montville, Aug. 25, on *Impatiens*.
- T. monotropæ* Hood. Montville, July 27, on *Monotropa*.
- T. tabaci* Lind. Throughout the season on many plants.
- T. thalictri* Hood. Demarest, July 11, on leaves *Thalictrum polygamum*. W. S. F. and J. C. C.
- T. walteri* Cwfd. Fort Lee, Sept. 12 to 19, in large numbers on leaves of *Eupatorium* in shady woods.

Merothripidæ

- Merothrips morgani* Hood. Ft. Lee, Aug. 15, a single dealated macropterous female. Under bark of a dry, dead, standing, hickory sapling, running very actively.

Phlæothripidæ

PHLÆOTHIRIPINÆ

Haplothripini

- Haplothrips niger* (Osb.). Commonly throughout the region, especially in flowers of daisies.

- Karnyothrips dodgei* (Hood). Fort Lee, Aug. 15, under bark of dead hickory sapling.
- Neoheegeria verbasci* (Osb.). Found everywhere on *Verbascum*.
- Bagnalliella yuccæ* (Hinds). To be found wherever *Yucca* occurs.
- Leptothrips mali* (Fitch). On leaves of various trees throughout the region.

Hoplothripini

- Liothrips caryæ* (Fitch). Throughout the region, in and around galls on hickory leaves, in May and June.
- L. citricornis* Hood. Taken commonly at the same time as the preceding and also on leaves of various plants.
- L. brevicornis* Hood. Fort Lee (J. C. C.) and Demarest (W. S. F.), in terminal shoots of sassafras, late in May to early in July.
- L. castaneæ* Hood. Demarest, early in July on leaves of chestnut. W. S. F. and J. C. C.
- L. umbripennis* Hood. Alpine, May 1, on pine, May 6, on oak. Denville, mid July, so abundant on leaves of chestnut oak as to distort the leaves. M. H. Sartor.
- Neothrips corticis* Hood. Demarest, April 18, and Cresskill, May 9 and Sept. 5, under bark scales of live apple trees.
- Pocillothrips ornatus* (Hood). Throughout the region found commonly from late in spring to autumn on bark of dead branches where the bright red and white nymphs may be seen running busily about.
- Rhynchothrips pruni* Hood. To be found at any time of the year under bark scales of live *Prunus*.
- R. buffæ* (Hood). Fort Lee, July 10, in cracks of bark of live maple tree.
- R. russelli* Hood. Demarest, abundant on leaves of Virginia creeper, May 26–July 3.
- R. tridentatus* (Shull). Fort Lee, abundant under bark scales of a live tree of the white oak group in August.
- R. usitatus* Hood. Everywhere on leaves of *Rhus copallina* late in June and early in July.
- Hoplothrips karnyi* (Hood). Throughout the region under bark

- of moist dead branches. Various dates through the season. W. S. F. and J. C. C.
- H. major* (Hood). To be found everywhere under moist bark of dead branches or tree trunks or on and under fungi on dead trees. Adults can be taken at any time of the year.
- H. (Trichothrips) ambitus* (Hinds). Fort Lee, mid August, under bark of dry dead standing hickory saplings.
- H. (T.) angusticeps* (Hood). Everywhere under dead moist bark and on polypores.
- H. (T.) flavicauda* (Morg.). Demarest, Sept. 9, beaten from a large polypore. W. S. F. Cresskill, early in September on young succulent polypores on dead birch.
- H. (T.) myceticola* Cwfd., n. sp. Cresskill, on polypore on dead birch, Aug. 28–Sept. 6. Description following.
- H. (T.) fieldsi* Cwfd., n. sp. Fort Lee, Apr. 11, under bark of a dead *Sambucus* stem. Description following.
- Zygothrips americanus* Hood. Under bark scales of live hickory and apple trees throughout the region.

Phlæothripini

- Phlæothrips chapmani* Hood. Fort Lee, July 24, on dead branches of *Cornus* in company with the following.
- P. picticornis* Cwfd., n. sp. Fort Lee, July 17–31, on dead *Cornus* and *Carpinus*. Description following.
- Hoplandrothrips funebris* Hood. Chatham, a single male, flying, Sept. 19. S. D. Whitlock.
- H. microps* Hood. Fort Lee, Aug. 7, in coleopterous burrow in dry, dead, standing, hickory sapling, and under bark of dead ash sapling.
- Neurothrips magnafemoralis* (Hinds). Alpine, May 1, on pine. Demarest, Aug. 7, on *Rhus*. Fort Lee, Aug. 18, on dead branches of chestnut.

MEGATHRIPINÆ

- Elaphrothrips tuberculatus* (Hood). Denville, July 14, on leaves of chestnut oak. M. H. Sartor.
- Megalothrips spinosus* Hood. Fort Lee, mid August, under bark of various dry dead branches, when males were not uncommon. Also on dead branches of *Cornus* sp.

DESCRIPTIONS OF NEW SPECIES

Taeniothrips betulæ new species.

FEMALE.—Length about 1.1 mm. Dark brown, head and especially thorax often with a reddish tinge; legs almost concolorous with body, femora lighter basally, tibiæ somewhat lighter in color and paler at bases and apices, tarsi yellow; antennæ brown, with segment 3 yellow, tinged with brownish, segment 4 light brown, segments 5 to 8 darker than 1 and 2; all body and wing bristles very stout and very dark in color; fore vein with two apical bristles close together.

Head (from front of eyes) much wider than long (156 μ to 112 μ), narrowed behind; cheeks almost straight, with transverse anastomosing lines; ocelli with red crescents; interocellar bristles close together (14–16 μ), 60–64 μ long, slightly in front of a line tangent to front margins of postocelli; postocular row of 4–5 short, weak bristles, the outer strongest, 20 μ long; segment 1 of antennæ light brown, 2 dark brown, 3 yellow, tinged brownish, 4 light brown, 5–8 very dark brown; third antennal segment with a long pedicel; segments 4 and 5 with short pedicels; segments 5 and 6 closely united; segment 3 narrowed toward tip but not vasiform, 4 somewhat narrowed at apex, 5 gradually widened from base to near apex, thence slightly narrowed; antennal lengths in μ :

1	2	3	4	5	6	7	8
24	38	48	44	36	52	8	16

Prothorax wider than long (184 to 142 μ), with faint transverse anastomosing lines, disk with scattered short bristles of which a pair on anterior margin, one on lateral margins, and one on disk in front of inner postangular spines are longer and stronger (20 μ) than the others; outer and inner postangulars 60 μ long, between them a short bristle, postmargin between postangulars with two pairs of bristles on each side, the inner pair strong, long, (36 μ), outer pair much weaker, 18 μ long; wings very dark brown; costa with 18 to 21 bristles, fore vein with 6 or 7 basal and 2 bristles close together near apex; hind vein with 10–12, usually 10 bristles; hind wing basally with a dark median streak; comb on eighth segment thickset, complete, bristles 24 μ long; inner pair of bristles on ninth segment 108 μ , outer 120 μ long; fore-wings 675–720 μ long.

MALE.—Length 0.85 mm. Reddish yellow, legs slightly lighter in color; antennæ brown, with basal and apical segments lighter than in female; segment 1 yellow, tinged with brown; 2 brown, very slightly darker than 3; 4 brown, lighter at base; 5 yellowish just beyond pedicel, brown beyond; 6 to 8 dark brown. Length of antennal segments in μ :

1	2	3	4	5	6	7	8
24	32	48	40	26	44	8	16

On the ninth abdominal segment between the major bristles of posterior angles and slightly more forward a row of 4 dark-brown bristles, the outer

pair longer ($26\ \mu$) and latero-cephalad of this row a single, weaker, light-colored bristle on each side; caudad of the row a pair of short, weak, light-colored bristles situated farther apart than the median pair of the row.

Type locality.—Fort Lee, N. J.

Host plant.—*Betula populifolia*.

Type.—Cat. No. 52667, U. S. National Museum. A pair taken in copula, July 17, 1937.

Many paratypes, from the same place, a single female taken July 10, 1937, many females and 10 males taken July 17, 1937, and a few taken July 24, 1937, all collected by the author.

This species is most closely related to *T. salicis* Reuter of Europe, and Dr. Priesner has kindly compared paratypes, which are deposited in his collection, with the European species. He states that in the female of *salicis* the prothoracic postangulars are at most $3\ \mu$ wide at base, the interocellar bristles on a level with fore margin of hind ocelli or even somewhat back of this and 22 to $25\ \mu$ apart, that the head is 92 to $96\ \mu$, measured from in front of eye, or $108\ \mu$ in total length, the wing length 744 – $848\ \mu$, that the major bristles are lighter in color, and that the costal bristles are more numerous, being 23 – 25 .

T. betulae has prothoracic postangulars 3.3 – $4\ \mu$ wide at base, interocellars placed farther forward and only about $14\ \mu$ apart, head much longer, wing much shorter, body bristles almost black, and costal bristles fewer in number. The male *betulae* has the bristles on the body and wing darker than in *salicis*, antennal joint 6 much shorter, all bristles much shorter and thicker, and the bristles on the ninth tergite arranged practically as in *salicis*. However, in his Monograph of Thysanoptera of Europe Priesner states that the posterior pair of bristles on the ninth segment are about as long as those in the row of 4.

Hoplothrips (Trichothrips) myceticola new species.

FEMALE (*brachypterous*).—Length about 1.1 mm. (fully distended, 1.65 mm.). Body almost uniformly dark brown, including legs and antennae; with red pigment in thorax and abdomen; tube yellow; eyes normal in size; ocelli present, with red crescents; major head and thoracic bristles brown with hyaline tips, blunt or mostly slightly dilated at tips.

Head longer than wide, with faint transverse anastomosing lines; distinctly wider than eyes; sides almost straight, slightly converging behind

and slightly constricted from about two-thirds back of eye to base of head; eyes directed forward, with outer sides almost straight and with sides of head extending forward one-half the eye length so that in profile only about seven facets are exposed; fore ocellus somewhat directed forward; antennæ brown, with segment 1 lightened basally, 2 yellow, brownish at sides, 3 yellow in basal one-half, brown beyond, 4-8 brown slightly increasingly so to tip of antennæ; segments 3-8 pedicellate; segment 3 with inner side almost straight, widened for four-fifths the length thence strongly narrowed to apex, outer side distinctly, almost evenly, strongly convex from beyond pedicel, with widest part nearer base than widest part of inner side; segments 4 and 5 almost evenly convex at sides; 6 and 7 narrower, barrel-shaped; 8 lanceolate; mouth cone short, not reaching middle of prosternum; sense cone formula: 3, 1-2; 4, 2-2; 5, 1-1⁺; 6, 1-1⁺; 7, 1 dorsally.

Prothorax more than twice as wide as long, slightly emarginate anteriorly; all major bristles thick except the slender anterior marginals; pterothorax almost square, sides parallel. Legs almost as deep brown as body, with apices of femora and bases and apices of tibiæ lighter, especially on anterior legs; all tarsi yellow, with a dark spot at tip; fore femora enlarged; fore tarsi unarmed; wing-retaining bristles, one pair on segments 2-7 strongly and doubly areuate only on 5-7; abdominal tergites short and broad, segment 5 being about 80 μ long for total chitinized area or 48 μ from basal carina to apex and about 300 μ wide.

Measurements (in μ): Head, length (from front of eyes) 184, greatest width 164, postoculars 12 from side of head, 14 back of eyes; antennæ:

1	2	3	4	5	6	7	8
32	48	50	46	44	40	36	39

Total length of antennæ (distended) 430; thorax, length at middle 112, width 250; tube length 100, apical width 32, basal width 64; setal measurements: Postoculars 56, anterior angulars (16 to) 36, anterior marginals (18 to) 24, midlaterals 20, epimerals 56, coxals 22, on ninth segment outer and inner 56, on tenth segment 128.

MALE (*brachypterous*).—Length (slightly shrunken) 0.95 mm. Similar to female but fore femora greatly enlarged; fore tibiæ slightly thickened and transversely wrinkled; fore tarsi with a long slender tooth (26 μ); segment 2 of antennæ darker; 3 yellow only to just beyond pedicel, rest brown, increasingly so toward tip; abdominal segment 9 yellowish in apical two-thirds fading to brown at sides.

Type locality.—Cresskill, N. J.

Additional locality.—Washingtonville, N. Y.

Type.—Cat. No. 52668, U. S. National Museum.

The types and paratypes were taken on young *Polyporus betulinus*, on standing dead gray birch, *Betula populifolia*, Sept. 6, 1937; other paratypes from the same locality and host taken

August 28 and 29 and September 5 and 6, 1937, all collected by the author. The paratypes from Washingtonville, N. Y., were from under the bark of a dead elm log, August 3, 1937, L. L. Pechuman, collector.

The male allotype, which is a poor specimen, is the only specimen of that sex taken.

Of the species having the fore tarsi unarmed in the female, *brevicruralis* Shull, *fuscus* Morgan, and *hoodi* Morgan have the eighth antennal segment with a broad base; *flavicauda* Morgan differs in having no ocelli, eyes small, only two sense cones on antennal segment 3, and head usually very distinctly lighter colored anteriorly than posteriorly; *fuscicornis* Hood is a much larger species with tube 0.8 length of head, terminal bristles three-fourths length of tube, and anterior angular and anterior marginal prothoracic bristles subequal in length, while in *myceticola* the anterior angulars are usually much longer than the anterior marginals.

Hoplothrips (*Trichothrips*) *fieldsi* new species.

FEMALE (*macropterosus*).—Length (distended) 2.42 mm. Head, thorax, and tube brown, rest of abdomen and legs yellow, abdomen with segments discally and femora stained with brown; antennæ with segment 1 brownish; 2–3 yellow tinged with brown, and 3 at apex light brownish; 4–8 deep brown with bases of 4 and 5 usually yellowish, segment 4 enlarged, wider than other segments and with many micro-sense cones on under side; 5 with many, and 6 with five to eight similar sense cones.

Head somewhat lighter brown than thorax, wider than long, with straight parallel sides, wider than eye width; eyes two-fifths length of head; ocelli large, lateral ocelli near eyes, front ocellus directed forward; postoculars pointed, far apart, 16 μ from eyes; head with delicate transverse anastomosing lines; mouth cone reaching beyond middle of prosterium; antennæ with segments 3–7 pedicellate, 8 not narrowed basally; segment 3 broadly obconical, narrowed abruptly from widest point to apex, distinctly circularly wrinkled at base; 4 enlarged, almost barrel-shaped, and with many (circa 30) micro-sense cones ventrad on more than apical half; 5 with sides parallel, narrowed basally and apically, with many (circa 15) micro-sense cones ventrad on apical half; 6 slightly widening apicad, with straight sides, ventrad 3–6 micro-sense cones on apical half; major sense cones on segments 5–6 slender; sense cone formula: 3, 1–1; 4, 1–1; 5, 1–1⁺; 6, 1–1⁺; 7, 1 dorsally; prothorax more than twice as wide, including coxæ, as long; major bristles pointed (with epimerals, postmarginals, and coxals at times minutely blunt or epimerals and coxals slightly dilated); anterior marginals rudi-

mentary; all wings distinctly brownish, with eight or nine double-fringe hairs; legs yellow, femora tinged with brownish, tarsi brown-spotted apically; fore femora greatly enlarged; fore tarsi with a large tooth; abdomen yellow, segment 1 brown, discs of other segments medially brownish; tube dark brown, lighter basally and apically; two pairs of wing-retaining bristles on segments 2-7, both slender, anterior pair short, posterior pair long, distinctly doubly arcuate only on segment 5; marginal abdominal bristles long, sharply pointed.

Measurements (in μ): Head: Length (from front of eyes) 200, width across eyes 228, greatest width 244, distance between postoculars 212. Prothorax: Width, including coxæ, 416, length medially 196. Tube: Length 206, basal width 92, apical width 40. Antennæ:

	1	2	3	4	5	6	7	8
Length	48	66	68	82	70	60	60	46
Width	40 (apical)	40	45	50	40	34	28	18

Setal measurements: Postoculars 84, anterior angulars 46, midlaterals 76-80, epimerals 90, postmarginals 84, coxals 52, on ninth abdominal segment (outer) 132, (inner) 108, on tenth segment 192.

MALE (*brachypterous*).—Length (distended) 2.10 mm. Similar to female but more uniformly colored, the head and thorax hardly as dark in color, abdomen more uniformly brownish but much lighter than tube; eyes small, about five facets in outline; ocelli absent; antennal segments 1-3 uniformly yellow, tinged with brown; 4-8 brown, increasingly so toward tip of antennæ; sides of head slightly curved; fore femora greatly enlarged; fore tibiæ thickened; tarsal tooth longer and thicker basally than in female; antennal segment 3 not so broadly obconical, segment 4 not enlarged; segments 4-6 ventrad with 2-4 apical micro-sense cones; wing-retaining bristles not thickened or arcuate.

Measurements in μ : Head: Length 180, width across eyes 184, greatest width 220. Prothorax: Width, including coxæ, 414, length medially 220. Tube: Length 180, width at base 88, at apex 40. Setal measurements: Postoculars 86, anterior angulars 80, midlaterals 82, epimerals 82, postmarginals 76, coxals 52. Antennæ:

	1	2	3	4	5	6	7	8
Length	48	64	64	64	64	60	48	40
Width	36 (apical)	36	36	36	32	30	26	16

FEMALE (*brachypterous*).—Length (fully distended) 3.0 mm. Similar to the macropterous form but with antennal segments 2-3 more distinctly brown; abdomen more uniformly brown; eyes small, about three facets in outline; antennæ very similar to those of brachypterous male; tarsal tooth about as in brachypterous male; ocelli absent. Antennæ in μ :

	1	2	3	4	5	6	7	8
	52	62	68	66	64	60	60	40

Described from a long series of specimens with the following records:

Type locality.—Olive Bridge, Ulster County, N. Y.

Under bark of a dead branch, August, 1936, W. S. Fields collector.

Other localities are as follows:

District of Columbia: Under bark of dead alder, May 16, 1937, J. E. Walter collector; under bark of a dead willow branch, June 9, 1937, J. E. Walter collector; under bark of dead *Sambucus* stem, January 12, 1937, J. E. Walter collector; under bark of a dead hanging branch of black locust, May 2, 1937, J. E. Walter collector; under bark of a dead branch of black walnut on ground, May 1, 1937, J. E. Walter collector.

New Jersey: Fort Lee. Under bark of a dead *Sambucus* stem, April 11, 1937, J. C. Crawford collector.

Type.—Cat. No. 52669, U. S. National Museum.

Dedicated to Mr. W. S. Fields, from whom I first received specimens of this species.

Nearer *Hoplothrips semicæcus* Uzel of Europe than any American species, none of which have antennal segments 4–6 ventrad with a series of micro-sense cones in the known macropterous forms. The macropterous form of *semicæcus* has antennal segments 7–8 longer, 4 less thickened, only one or two micro-sense cones ventrad on 6 and fewer of them on 4–5; in the brachypterous form *semicæcus* has the tube longer, bristles on segment 9 longer, and joint 3 of antennæ with the basal wrinkles much less conspicuous. Dr. H. Priesner has kindly compared this species with the European and furnished the foregoing notes.

It should be noted that while in *fieldsi* the major bristles of the prothorax are mostly sharply pointed, those of the posterior margin are often blunted or the epimerals slightly expanded at apex.

***Phlaeothrips picticornis* new species.**

FEMALE.—Holotype (*macropterous*): Length about 2.4 mm. (fully distended, 3.5 mm.). Dark brown (in life whole insect almost black), abdomen somewhat lighter, with much red pigment in thorax and abdomen; antennæ dark brown, with bases of segments 3–6 light yellow, abruptly dark brown beyond; legs dark brown, fore tibiæ apically and all tarsi yellow with a dark spot at tip; fore tarsi armed with a large tooth; abdominal segments

3-8 anteriorly with a small dorso-lateral snow-white spot on each side, often also one posteriorly or these irregularly connected to form a stripe.

Head 333 μ long (from front of eyes), widest just back of eyes (267 μ), narrowed behind; cheeks gently rounded and at rear with a slight necklike constriction; postoculars absent; head with faint transverse anastomosing lines; cheeks in outline with three or four short spines, the posterior one much longer and stronger than the others; anterior ocellus directed forward, situated on a prominence which has longitudinal anastomosing lines; anterior ocellus farther from posterior ocelli than they are from each other; antennal segment 1 concolorous with head; 2 somewhat lighter; 3 yellow in basal one-third or more, mottled with light brown beyond and with a yellowish tip; 4 clear yellow in basal one-third, brown beyond, with tip lightened; 5 yellow to just beyond pedicel, brown beyond, with tip lightened; 6 with pedicel yellow; rest of antennæ dark brown, with base of 7 lighter; segments 3-6 with long pedicels, that of 6 broader, 7 and 8 closely united. Sense cone formula:

3, 1-2; 4, 2-2; 5, 1-1⁺; 6, 1-1⁺; 7, 1 dorsally

Length of antennal segments in μ :

1	2	3	4	5	6	7	8
60	80	96	88	80	72	52	40

Prothorax 200 μ long, 400 μ wide; major bristles dilated at tips, light brownish, with epimerals and coxals almost hyaline; lengths of prothoracic bristles: Anterior angulars 40 μ , anterior marginals 24 μ , midlaterals 20 μ , epimerals 92 μ , postmarginals 40 μ , coxals 40 μ ; fore femora swollen; fore tibiae somewhat enlarged, abruptly bent near base, transversally wrinkled; legs about concolorous with body, fore tibiae somewhat lighter and yellow at tips, fore tarsi with a long, straight, slender tooth arising near base of first tarsal joint; scale and extreme base of fore wings dark brown, rest of wing very lightly clouded, more distinctly so medially, with 11 (9-12) accessory fringe hairs; prothorax reticulated, especially apparent at anterior angles.

Abdomen with anterior segments somewhat lighter brown, with faint, transverse, anastomosing lines, becoming reticulated at sides, reticulations covering segment 9; segments 2-8 carinate at base, segments 2-7 with two pairs of brown, doubly arcuate, wing-retaining bristles, the posterior pair strong, the anterior pair much shorter and weaker; major lateral bristles subhyaline, capitate; tube 216 μ long, lighter at tip, sides straight to near base, 88 μ wide at base, 48 μ wide at apex, terminal bristles 200 μ long.

MALE.—Allotype (*macropterosus ædymer*): Length 2.3 mm. (distended, 3 mm.). Similar to the female, posterior spine on cheeks longer than in female (34 μ), fore tarsal tooth larger and broad basally; anterior angular bristles on prothorax set well back from anterior margin, almost 200 μ long, anterior marginals minute, midlaterals hardly 16 μ long, epimerals 88 μ , postmarginals 38 μ , coxals 48 μ , all only slightly brownish, fore coxæ with

several short, very stout bristles caudad; fore femora more enlarged; thickened truncate spines on ninth abdominal segment $56\ \mu$ long, dark brown.

MALE (*gynacoid*).—Length 2.3 mm. Similar, but with prothorax and fore legs not so developed and anterior angular bristles of prothorax $60\ \mu$ long; tooth on fore tarsi not so broad, curved.

Type locality.—Fort Lee, N. J.

Type.—Cat. No. 52670, U. S. National Museum.

Holotype female and allotype male collected on branchlets of the suspended dead top of a dogwood (*Cornus* sp.) tree, July 24, 1937, together with three female and one male paratypes; eight female and four male paratypes taken on same tree, July 17, 1937; one female paratype, July 31, 1937, on suspended dead branch of *Carpinus* sp. From the same locality one gynacoid paratype (the only one taken) and one oedymmer male paratype reared from nymphs collected April 11, 1937, under bark of dead branch (probably beech). One male paratype, Englewood Cliffs, N. J., Aug. 29, 1937, on branch of a fallen dead oak tree. All collected by J. C. Crawford.

Very similar to *Phlaothrips chapmani* Hood, which was taken with it, but differs in having the antennal segments longer, the bases of the intermediate antennal segments light, the fore tibiae yellow apically, the tarsi yellow, the white abdominal marks usually spots instead of a continuous band, the wings infuscated, etc.